

Version of Amended Claims With Markings to Show Changes Made:

18. (Amended) An isolated nucleic acid molecule comprising at least 20 contiguous nucleotides of SEQ ID NO:1, wherein the 20 contiguous nucleotides include position 89837 of SEQ ID NO:1, and wherein position 89837 of SEQ ID NO:1 is 'T' instead of 'C'. [and further comprising an alteration, wherein said alteration is selected from the group consisting of T at position 89837, G at position 154202, A at position 154431, and G at position 160052.]

19. (Amended) An isolated nucleic acid molecule comprising at least 30 contiguous nucleotides of SEQ ID NO:1, wherein the 30 contiguous nucleotides include position 89837 of SEQ ID NO:1, and wherein position 89837 of SEQ ID NO:1 is 'T' instead of 'C'. [and further comprising an alteration, wherein said alteration is selected from the group consisting of T at position 89837, G at position 154202, A at position 154431, and G at position 160052.]

20. (Amended) An isolated nucleic acid molecule comprising SEQ ID NO:1, wherein position 89837 of SEQ ID NO:1 is 'T' instead of 'C'. [and further comprising an alteration, wherein said alteration is selected from the group consisting of T at position 89837, G at position 154202, A at position 154430, and G at position 160052.]

21. (Amended) An isolated nucleic acid molecule comprising [The isolated nucleic acid molecule of claim 20, wherein the nucleic acid molecule comprises] positions 89803-89988 of SEQ ID NO:1, wherein position 89837 of SEQ ID NO:1 is 'T' instead of 'C' [and said alteration is T at position 89837].

26. (Amended) A nucleic acid probe that is complementary over the entire length of said probe to a segment of SEQ ID NO:1 that includes position 89837 of SEQ ID NO:1, wherein position 89837 of SEQ ID NO:1 is 'T' instead of 'C', such that the probe [which] hybridizes under high stringency conditions to a nucleic acid molecule comprising said segment of SEQ ID NO:1 [the isolated nucleic acid molecule of claim 20] but does not hybridize to a nucleic acid molecule comprising said segment of SEQ ID NO:1 having a 'C' at position 89837 [having the sequence of SEQ ID NO:1], wherein said high stringency conditions are hybridization

in 6X sodium chloride/sodium citrate (SSC) at about 45 °C, followed by one or more washes in 0.2 X SSC, 0.1% SDS at 50-65 °C.

32. (Amended) The probe of claim 26 [27], wherein the probe is detectably labeled.

REMARKS

Applicants have studied the Office Action mailed December 3, 2002 and have made amendments to the claims. It is respectfully submitted that the application, as amended, is in condition for allowance. Reconsideration and allowance of the pending claims in view of the above amendments and the following remarks is respectfully requested.

Claim Objections:

The Examiner objected to claims 18-21, 26-27, and 32 for containing limitations drawn to non-elected subject matter.

In response, claims 18-20 have been amended, and claim 27 has been canceled, to remove the limitations drawn to non-elected subject matter (e.g., 'G' at position 154202, 'A' at position 154431, and 'G' at position 160052 of SEQ ID NO:1).

Rejection of claims 26-27 and 32 under 35 USC §112, 1st paragraph:

The Examiner rejected claims 26-27 and 32 under 35 USC §112, 1st paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 26, as amended, clearly indicates that Applicants were in possession of the claimed invention as of the application filing date (claim 27 has been canceled, thus making the rejection moot with respect to claim 27). For example, amended claim 26 recites both structural and functional characteristics of the claimed nucleic acid probe.

Rejection of claims 26-27 and 32 under 35 USC §112, 2nd paragraph:

The Examiner rejected claims 26-27 and 32 under 35 USC §112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner states that the term "high stringency conditions" is a conditional term that renders the claim indefinite and thus the metes and bounds of the claim thus cannot be ascertained.

Applicants have hereby amended claim 26 to recite stringency conditions, thereby rendering the claim definite. These stringency conditions are supported in the specification, as originally filed, at page 19, line 29, through page 20, line 1. (Claim 27 has been canceled, thus making the rejection moot with respect to claim 27.)

Rejection of claims 26-27 and 32 under 35 USC §102(b):

The Examiner rejected claims 26-27 and 32 under 35 USC §102(b) as being anticipated by the Stratagene catalog (1991), which teaches the use of random 9-mers which the Examiner asserts are capable of hybridizing to all gene sequences.

In response, Applicants respectfully assert that the Stratagene reference does not anticipate claims 26 and 32 (claim 27 has been canceled, thus making the rejection moot with respect to claim 27).

In particular, no evidence (e.g., nucleic acid sequence alignments) has been presented that would indicate that the Stratagene catalogue teaches probes that could hybridize to the specific nucleic acid molecules encompassed by claim 26. The Examiner has only provided a blanket assertion that "the Stratagene catalogue teaches the use of random 9-mers capable of hybridizing to all gene sequences". However, nowhere in the Stratagene catalogue entry is there any reference to random 9-mers being capable of hybridizing to all gene sequences. This appears to be an assumption made by the Examiner which is not supported by the reference.

C nclusions

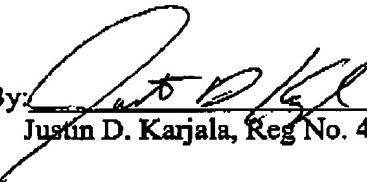
Claims 18-21, 26, and 32 have been amended by the present response, claim 27 has been canceled, and claims 37-40 have been added, as indicated above. As such, claims 18-21, 26, 32, and 37-40 are presently pending.

The amendments to the claims and the newly added claims add no new subject matter and their entry is respectfully requested.

In view of the above remarks and amendments, Applicants respectfully submit that the application and claims are in condition for allowance, and request that the Examiner reconsider and withdraw the objections and rejections. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is invited to call the undersigned agent at (240) 453-3812 should the Examiner believe a telephone interview would advance prosecution of the application.

Respectfully submitted,

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